Human CLEC-1 Antibody

Monoclonal Mouse IgG_{2B} Clone # 685316

Catalog Number: MAB17041

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CLEC-1 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human CLEC-2, -3B, -10A, or -14A is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 685316
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CLEC-1 Gln77-Asp280 Accession # Q8NC01
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

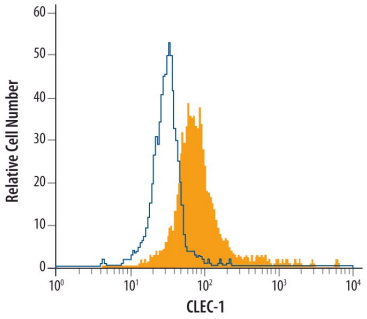
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	2.5 µg/10^6 cells	See Below

DATA

Flow Cytometry



Detection of CLEC-1 in Human Blood Monocytes by Flow Cytometry. Human peripheral blood monocytes were stained with Mouse Anti-Human CLEC-1 Monoclonal Antibody (Catalog # MAB17041, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CLEC-1 (C-type lectin-like receptor-1) is a type 2 transmembrane protein that belongs to the Dectin-1 family of C-type lectins (1, 2). It consists of a 52 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 207 aa extracellular domain (ECD) (3). The ECD contains a carbohydrate recognition domain (CRD) that includes cysteine residues with conserved spacing (4). In other C-type lectins, these cysteines form intrachain disulfide bonds that stabilize the CRD protein fold (4). CLEC-1 is a nonclassical C-type lectin in that its CRD lacks consensus amino acids which mediate calcium dependent carbohydrate binding in other C-type lectins (2, 3). The cytoplasmic domain contains one tyrosine, multiple serine and threonine, and a cluster of aspartic acid residues. The CLEC-1, CLEC-2, Dectin-1, and LOX-1 genes are located within the NK gene complex that also encodes several receptors involved in regulating NK cell activation (3, 5). CLEC-1 is most highly expressed in activated dendritic cells and at lower levels in endothelial cells and monocytes (3, 5). Within the CRD, human CLEC-1 shares 65% aa sequence identity with mouse and rat CLEC-1 and 26%-36% with the other human Dectin-1 family lectins CLEC-2, CLEC9A, CLEC12B, Dectin-1, LOX-1, and MICL.

References:

1. Kanazawa, N. (2007) J. Dermatol. Sci. **45**:77.
2. Pyz, E. *et al*. (2006) Ann. Med. **38**:242.
3. Colonna, M. *et al*. (2000) Eur. J. Immunol. **30**:697.
4. Zelensky, A.N. and J.E. Gready (2005) FEBS J. **272**:6179.
5. Sobanov, Y. *et al*. (2001) Eur. J. Immunol. **31**:3493.